

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims

1. (Currently amended) ~~A screening method for identifying a compound that inhibits growth of pathogenic microbes mycobacterial species having a two component system of DevR DevS and/or DevR Rv2027c and its homologues, said method comprising the following steps~~ A method of SDS-PAGE based high throughput assaying for identifying drugs against mycobacterial species having two-component system of DevR-DevS and/or DevR-Rv2027c, said method comprising steps of:

- a) ~~autophosphorylating DevS, and Rv2027c proteins and their single domain derivatives including mutant variant proteins, and thereafter, phosphotransferring to DevR and its derivatives in SDS-PAGE or High-throughput format in the presence of a test compound, and~~ over-expressing DevR, DevS and Rv2027c and their single domain derivatives,
- b) ~~determining the potential of the test compound to inhibit growth of pathogenic microbes, wherein the potential of the test compound is inversely proportional to (i) the degree of autophosphorylation of DevS and Rv2027c, (ii) the degree of phosphotransfer based dephosphorylation of DevR and its single domain derivative, and (iii) the degree of dephosphorylation of phosphorylated species of DevS and Rv2027c and their single domain derivatives.~~

autophosphorylating DevS and Rv2027c proteins individually and thereafter, transferring phosphoryl moiety to DevR and analyzing the reaction products by SDS-PAGE or high-throughput format in the presence of a test compound and

- c) determining the drug potential of the test compound; wherein the potency of the drug is inversely proportional to (i) the degree of autophosphorylation of DevB and Rv2027c proteins, (ii) the degree of phosphotransfer from phosphorylated DevS, and Rv2027 proteins to DevR and (iii) the degree of loss of phosphate-associated radioactivity from DevS/Rv2027c and DevR in a reaction containing DevS, DevR/Rv2027 and DevR.

2. (Previously presented) The method as claimed in claim 1, wherein the DevS derivatives are selected from the group consisting of DevS₂₀₁, DevS₅₇₈, DevS₂₀₁-H395Q, DevS₂₀₁-H397Q, DevS₂₀₁-H397A, and DevS₂₀₁-N503D.

3. (Previously presented) The method as claimed in claim 1, wherein the Rv2027c derivatives are selected from the group consisting of Rv2027₁₉₄, and Rv2027₁₉₄-H392Q.

4. (Previously presented) The method as claimed in claim 1, wherein the DevR derivative is DevRN₁₄₅ or the mutant protein is selected from the group consisting of DevR-D8N, DevR-D9N, DevR-D54V, DevR-D54N and DevR-K104E.

5. (Currently amended) The method of claim 1, wherein the DevR, DevS, Rv2027, and their single domain derivatives ~~including mutant variant proteins~~ are overexpressed in *E. coli*.

6. (Previously presented) The method of claim 1, wherein the test compound shows an-activity selected from a group consisting of antibiotic activity, antibacterial activity, anti-microbial activity and anti-tubercular activity.

7-21. (Cancelled)